

SILICON PNP EPITAXIAL TYPE (PCT PROCESS)
(DARLINGTON POWER)

2SD687

SWITCHING APPLICATIONS.
HAMMER DRIVE, PULSE MOTOR DRIVE APPLICATIONS.
POWER AMPLIFIER APPLICATIONS.

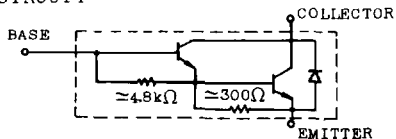
FEATURES :

- . High DC Current Gain
: $h_{FE}=2000(\text{Min.})(V_{CE}=2V, I_C=1A)$
- . Low Saturation Voltage
: $V_{CE(\text{sat})}=1.5V(\text{Max.})(I_C=2A)$

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

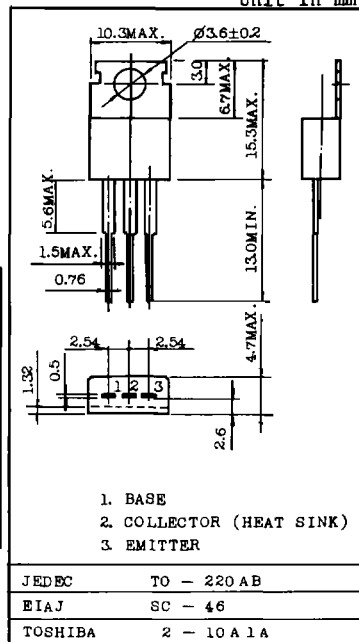
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	3	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	25	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

EQUIVALENT CIRCUIT



INDUSTRIAL APPLICATIONS

Unit in mm



JEDEC	TO - 220 AB
EIAJ	SC - 46
TOSHIBA	2 - 10A 1A

Mounting Kit No. AC75
Weight : 1.9g

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=60V, I_E=0$	-	-	20	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	2.5	mA
Collector-Emitter Voltage		$V_{(BR)CEO}$	$I_C=25\text{mA}, I_B=0$	40	-	-	V
DC Current Gain		$h_{FE(1)}$	$V_{CE}=2V, I_C=1A$	2000	-	-	
		$h_{FE(2)}$	$V_{CE}=2V, I_C=3A$	1000	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(\text{sat})}$	$I_C=2A, I_B=4\text{mA}$	-	-	1.5	V
	Base-Emitter	$V_{BE(\text{sat})}$	$I_C=2A, I_B=4\text{mA}$	-	-	2.0	
Switching Time	Turn-on Time	t_{on}		-	0.1	-	μs
	Storage Time	t_{stg}		-	1.0	-	
	Fall Time	t_f		-	0.2	-	

